

## **Coenzyme Q10 for Relief of Muscle Ache in Patients Treated with Statins**

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In a small study, supplements conferred a considerable benefit.

Statin use is associated with a variety of muscle-related symptoms. Might supplementation with coenzyme Q10, an essential mitochondrial energy-production cofactor that is inhibited by statins, reduce muscle pain accompanying statin treatment? To find out, investigators randomly assigned 32 patients taking statins for hyperlipidemia and reporting myopathic symptoms to receive a daily supplement of 100 mg coenzyme Q10 (n=18) or 400 IU of vitamin E (n=14) for 30 days. Vitamin E was selected as a control because coenzyme Q10 is an antioxidant.

All participants completed the trial and complied entirely with their dietary supplement regimens. There was no between-group difference in statin treatment. The intensity of myopathic pain, as assessed by the Brief Pain Inventory and reported as a pain severity score, was similar in the two groups before supplementation. At 30 days, pain intensity had decreased by 40% in the coenzyme Q10 group compared with no change in pain intensity in the vitamin E group ( $P < 0.001$ ). Sixteen of 18 patients reported pain relief

with coenzyme Q10, but just 3 of 14 patients reported pain relief with vitamin E. Pain scores did not correlate with plasma creatine kinase concentrations, either before or after the intervention.

**Comment:** These results suggest that coenzyme Q10 supplementation is an effective treatment for some patients with muscle aches due to statin treatment. Clinicians should assess patients' muscle symptoms before initiating statin therapy to establish a baseline for evaluating symptoms associated with subsequent statin use.

Giuseppe Caso, Patricia Kelly, Margaret A. McNurlan, William E. Lawson. **Effect of Coenzyme Q10 on Myopathic Symptoms in Patients Treated With Statins.** *American Journal of Cardiology* - 15 May 2007; 99(10):1409-1412.

Treatment of hypercholesterolemia with statins (3-hydroxy-3-methylglutaryl coenzyme A reductase inhibitors) is effective in the primary and secondary prevention of cardiovascular disease. However, statin use is often associated with a variety of muscle-related symptoms or myopathies. Myopathy may be related in part to statin inhibition of the endogenous synthesis of coenzyme Q10, an essential cofactor for mitochondrial energy production. The aim of this study is to determine whether coenzyme Q10 supplementation would reduce the degree of muscle pain associated with statin treatment. Patients with myopathic symptoms were randomly assigned in a double-blinded protocol to treatment with coenzyme Q10 (100 mg/day, n = 18) or vitamin E (400 IU/day, n = 14) for 30 days. Muscle pain and pain interference with daily activities were assessed before and after treatment. After a 30-day intervention, pain severity decreased by 40% ( $p < 0.001$ ) and pain interference with daily activities decreased by 38% ( $p < 0.02$ ) in the group treated with coenzyme Q10. In contrast, no changes in pain severity (+9%,  $p = \text{NS}$ ) or pain interference with daily activities (-11%,  $p = \text{NS}$ ) was observed in the group treated with vitamin E. In conclusion, results suggest that coenzyme Q10 supplementation may decrease muscle pain associated with statin treatment. Thus, coenzyme Q10 supplementation may offer an alternative to stopping treatment with these vital drugs.